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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,261	03/31/2004	Bing Leung Cheung	778.056US1	7468

21186 7590 04/18/2007
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EXAMINER

WENDELL, ANDREW

ART UNIT	PAPER NUMBER
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2618

MAIL DATE	DELIVERY MODE
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04/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/815,261	Applicant(s) CHEUNG ET AL.	
	Examiner Andrew Wendell	Art Unit 2618	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 30 March 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: 17-23.
Claim(s) objected to: _____.
Claim(s) rejected: 1-16 and 24.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See attached office action.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.

Andrew Wendell
571-272-0557


NAY MAUNG
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 6, 8, 13, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dockemeyer, Jr. et al. (US Pat Appl# 2004/0214540) in view of Haub et al. (US Pat Appl# 2005/0026564).

Regarding claim 1, Dockemeyer, Jr. et al. radio receiver with optimized multiple variable gain circuits teaches sampling the receive band with the receiver filters 44 and 64 (Fig. 2) across substantially all of the receive band 104 and 106 (Fig. 4); measuring received power at each sample 108 (Fig. 4); and calibrating the receiver gains as a function of the minimum received power across the receive band 110 and 112 (Fig. 4). Dockemeyer, Jr. et al. fails to teach setting receiver filters to a narrow bandwidth.

Haub et al. current reduction by dynamic receiver adjustment in a communication device teaches setting receiver filters 320 and 323 (Fig. 3) to a narrow bandwidth (Section 0030 and 0047).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate setting receiver filters to a narrow bandwidth as taught by Haub et al. into Dockemeyer, Jr. et al. calibrating gain receiver in order to reduce interference (Section 0002 and 0003).

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Regarding claim 2, it is obvious and known that in a CDMA radio that wherein the narrow bandwidth is approximately 100 KHz ("Narrowband" TRA, see attachment).

Regarding claim 3, the combination including Haub et al. teaches that is possible and obvious that wherein the number of samples per receiver filter can be set between approximately 5 and 10 across a receive band of approximately 25 MHz (Section 0030 and 0047).

Regarding claim 6, the combination including Haub et al. teaches wherein the receivers are CDMA channel receivers (Section 0002 and 0030).

Regarding claim 8, the combination including Dockemeyer, Jr. et al. teaches wherein there are three CDMA (multiple channels) receivers (Fig. 1).

Regarding claim 13, the combination including Dockemeyer, Jr. et al. teaches two additional radio modules (multiple channels), each corresponding to a different CDMA sector (multiple channels, Fig. 1).

Regarding claim 24, Dockemeyer, Jr. et al. radio receiver with optimized multiple variable gain circuits teaches means for detecting interference 52 and 50 or 70 (Fig. 2); and means for adjusting 54 and 30 (Fig. 2) receiver gain 40 or 60 (Fig. 2) based on narrowband sampling 50 or 70 (Fig. 2) of a noise floor (interference) within a bandwidth of a configured channel. Dockemeyer et al. fails to teach setting a bandwidth for multiple filters to a portion of a channel.

Haub et al. teaches setting a bandwidth for multiple filters 320 and 323 (Fig. 3) to a portion of a channel (Section 0030 and 0047).

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3. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dockemeyer, Jr. et al. (US Pat Appl# 2004/0214540) and Haub et al. (US Pat Appl# 2005/0026564) and in further view of Vepsalainen et al (US Pat Appl# 2004/0176055).

Regarding claim 4, Dockemeyer, Jr. et al. in view of Haub et al. teaches the limitations in claim 1. Both Haub et al. and Dockemeyer, Jr. et al. fails to teach about settling time for the samples.

Vepsalainen et al. method for compensating DC level in an adaptive radio receiver teaches waiting at each sample for the received power to settle 50 (Fig. 5).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate settling time for the samples as taught by Vepsalainen et al. into setting receiver filters to a narrow bandwidth as taught by Haub et al. into Dockemeyer, Jr. et al. calibrating gain receiver in order to improve DC offset (Section 0002 and 0003).

Regarding claim 5, Vepsalainen et al. teaches wherein the wait is approximately three seconds or any amount of time 50 (Fig. 5).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dockemeyer, Jr. et al. (US Pat Appl# 2004/0214540) in view of Haub et al. (US Pat Appl# 2005/0026564) and in further view of Usui et al. (US Pat# 5,818,827).

Regarding claim 7, Dockemeyer, Jr. et al. in view of Haub et al. teaches the limitations in claim 6. Dockemeyer, Jr. et al. and Haub et al. fail to teach about a CDMA channel being 1.23 wide.

Usui et al. radio communication device teaches wherein the CDMA channel is approximately 1.23 MHz wide (Col. 6 lines 55-58), and it is known and obvious that the narrow bandwidth is approximately 100 KHz ("Narrowband" TRA, see attachment).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a CDMA channel being 1.23 wide as taught by Usui et al. into setting receiver filters to a narrow bandwidth as taught by Haub et al. into Dockemeyer, Jr. et al. calibrating gain receiver in order to allow a frequency band to be effectively utilized (Col. 1 lines 65-67).

5. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haub et al. (US Pat Appl# 2005/0026564).

Regarding claim 9, Haub et al. current reduction by dynamic receiver adjustment in a communication device teaches a receiver 302 (Fig. 3); an adjustable receiver filter 320 or 323 (Fig. 3); a power detector 308 (Fig. 3); and a micro-controller 308 (Fig. 3) across a receive band and adjusts a gain of the receiver as a function of power detected (Section 0035 and 0036). Haub et al. fails to teach clearly about a micro-controller that adjusts the receiver filter to sample a narrow bandwidth.

However, it would have been obvious that the micro-controller 308 (Fig. 3) adjusts the receiver filter to sample a narrow bandwidth because there is implied of some sort of narrowband filtering is done because the receiver handles both wideband and narrowband communications and the filters can be adjusted (Section 0030 and 0047).

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Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a micro-controller that adjusts the receiver filter to sample a narrow bandwidth into Haub et al. receiver in order to reduce interference signals and power consumption (Section 0002 and 0003).

Regarding claim 10, Haub et al. teaches wherein the gain is adjusted based on minimum power detected over the samples (Section 0016).

Regarding claim 11, it is obvious and known that in a CDMA radio that wherein the narrow bandwidth is approximately 100 KHz (See claim 2).

Regarding claim 12, teaches wherein the receiver is a receiver for a CDMA channel (Section 0002 and 0030).

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haub et al. (US Pat Appl# 2005/0026564) in view of Lindell et al. (US Pat# 6,978,125).

Regarding claim 14, Haub et al. current reduction by dynamic receiver adjustment in a communication device teaches the limitations in claim 9. Haub et al. fails to teach a low noise amplifier and an adjustable attenuator.

Lindell et al. apparatus for tuning pre-selection filters in radio receivers teaches a low noise amplifier 1805 (Fig. 18) and an adjustable attenuator 1837 (Fig. 18).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to a low noise amplifier and an adjustable attenuator as taught by Lindell et al. into Haub et al. adjustable receiver in order to improve noise performance (Col. 3 line 43-Col. 4 line 3).

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haub et al. (US Pat Appl# 2005/0026564) in view of Lindell et al. (US Pat# 6,978,125) as applied to claims 9 and 14 above, and further in view of Cho (US Pat Appl# 2003/0073423).

Regarding claim 15, Haub et al. in view of Lindell et al. teaches the limitations in claims 9 and 14. Both Lindell et al. and Haub et al. fail to teach means for selectively bypassing or enabling the low noise amplifier.

Cho receiver of mobile communication teaches means for selectively 300 (Fig. 3) bypassing or enabling the low noise amplifier 103 (Fig. 3).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to selectively bypassing or enabling the low noise amplifier as taught by Cho into a low noise amplifier and an adjustable attenuator as taught by Lindell et al. into Haub et al. adjustable receiver in order to increase linearity (Section 0008).

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haub et al. (US Pat Appl# 2005/0026564) in view of Seo (US Pat# 6,738,367).

Regarding claim 16, Haub et al. current reduction by dynamic receiver adjustment in a communication device teaches the limitations in claim 9. Haub et al. fails to teach a pair of antennas coupled to a duplexer.

Seo's apparatus for receiving signals for cellular radio telecommunication system teaches a duplexer 210 (Fig. 2) coupled to a pair of antennas 202 and 204 (Fig. 2) for implementing receive diversity.

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to a pair of antennas coupled to a duplexer as taught by Seo into Haub et al. adjustable receiver in order to handle more frequency channels (Col. 2 lines 21-25).

Response to Arguments

Applicant's Remarks	Examiner's Response
Regarding claim 1, "Further, it does not address the corresponding remark of Applicant: "There is no concept of sampling across all of the receive band with narrow bandwidth filters as claimed." The statement does not describe sampling across an entire band with narrow band filters."	The claim reads "sampling the receive band with the receiver filters across <u>substantially</u> all of the receive band;" the limitation "substantially" does not state sampling is done across all of an entire band.
Regarding claim 17, "It is not clear how reading narrowband and wideband signals teaches using multiple filter receivers to cover the bandwidth of a channel, as described in the combination of the first two elements of claim 17."	Examiner agrees with applicant's remarks and claims 17-22 are allowed.
Regarding claim 23, "There is no teaching of how to take Haub's multiple receiver	Examiner agrees with applicant's remarks and claim 23 is allowed.

filters and merge them together to cover a band in the context of identifying whether interference is narrowband or wideband as claimed."	
Regarding claim 24, "Applicant is not aware that reading and sweeping mean the same thing:"	Examiner fails to see "sweeping" mentioned in the claimed limitations.